

ABSTRACT OF THE DISCLOSURE

A leak detector sequentially emits pulse signals toward a human body at a position at which a needle is inserted, detects pulse signals reflected inside of the human body, and measures a time interval between the emission and the detection for each of the pulse signals. Then, the leak detector calculates the difference between the measured interval and a predetermined time interval, and generates a leak warning for notification when the difference exceeds an acceptable range. Since a swelling on the surface of the human body causes a path of the pulse signal to extend, the leak detector can detect, based on the extended signal path, that the needle has come off a blood vessel.